

REMARKS

Claims 5, 10 and 31-36 currently appear in this application. The Office Action of December 31, 2001, has been carefully studied. It is believed that all of the claims are allowable, and favorable action is earnestly requested.

The amendments presented herewith are of formal nature only, i.e., made to place the claims into better form consistent with U.S. practice. The amendments are not "narrowing" amendments and are not made for any "substantial reason related to patentability." The scope of the claims has not been changed; no limitations have been added and none is intended.

Claim Objections

Claim 33 is objected to because the term "pollutant" in line 12 should be --pullulan--.

Claim 33 has been amended to correct this self-evident typographical error.

Rejections under 35 U.S.C. 112

Claims 5, 10 and 31-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5 and 33 have been amended to recite that the method claimed is a method for inhibiting the decrease of active-oxygen-eliminating activity in a plant wherein eth decrease in the activity is associated with slicing or disruption of a plant or an edible part thereof. Additionally, claims 5 and 33 have been amended to recite that the trehalose is to be effective for inhibiting the decrease of active-oxygen-eliminating activity.

It is respectfully submitted that the term "at least about" is not indefinite, and is commonly used in patent claims. The term "about" means that the percentage is approximately 20%, but that the percentage need not be exactly 20%. The term "at least", which modifies "about 20%", means that the trehalose is present in an amount of approximately 20% or more.

Art Rejections

Claims 5, 10 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruta et al. as supported by Cardona, or over Maruta et al. as supported by Cardona in view of Mandai et al.

This rejection is respectfully traversed. Claims 5 and 33 have been amended to clarify exactly what is the present invention. That is, according to the present invention, an inhibitory agent is incorporated:

- a. into a fresh plant or an edible part of the fresh plant;
- b. before or after slicing or disrupting the fresh plant or edible part thereof, or during boiling the fresh plant or edible part thereof.

Maruta et al. do not disclose the above features of the presently claimed invention. Maruta et al. describe trehalose as a non-reducing saccharide consisting of glucose units, which neither reacts with substances containing amino groups nor deteriorates amino acid-containing substances (column 1, lines 19-29). According to Maruta et al., column 12, lines 20-34, trehalose is a stable sweetener, and, especially crystalline trehalose is arbitrarily used as a sugar coating agent for tablets when used in combination with a binder such as pullulan, hydroxyethyl starch, or polyvinylpyrrolidone. In addition, trehalose has properties such as osmotic pressure-controlling ability,

filler-imparting ability, gloss-imparting ability, moisture-retaining ability, viscosity-imparting ability, substantial[ly] no fermentability, ability to prevent retrogradation of gelatinized starch, and ability to prevent crystallization of other saccharides. The trehalose and saccharide compositions containing the same can be arbitrarily used as a sweetener, taste-improving agent, quality-improving agent, stabilizer and filler in a variety of compositions such as food product, cigarettes, tobaccos, feeds, cosmetics, and pharmaceuticals.

It is clear from the description of trehalose in Maruta et al. that there is neither teaching nor suggestion to use trehalose to inhibit the decrease of naturally occurring active-oxygen-eliminating ability in a fresh plant which the plant is sliced or disrupted. There is nothing in Maruta et al. that would lead one skilled in the art to add trehalose to a fresh plant or edible portions thereof when the plant or portions are sliced, disrupted, boiled, etc., to inhibit the decrease of naturally occurring active-oxygen-eliminating activity present in the fresh plant.

Cardona adds nothing to Maruta et al., as Cardona merely discloses antioxidant compositions containing selenomethionine, DL- α -tocopherol acetate, ascorbic acid, β -carotene, thiamine HCl, riboflavin, pyridoxine HCl, nicotinamide, glutathione, and L-cysteine. This product is said to act on free radicals and thus is used for preventing and eliminating degenerative disorders. There is nothing in Cardona that suggests adding this composition to fresh plants or portions thereof to inhibit decrease of naturally occurring active-oxygen-eliminating ability. The composition of Cardona is intended for ingestion by a

person, rather than incorporation into a plant product to inhibit decrease of naturally occurring active-oxygen-eliminating ability.

Mandai et al. add nothing to the combination of Maruta et al. and Cardona. Mandai et al. disclose that trehalose is used as a desiccant and to prepare dehydrated food products. This has absolutely nothing at all to do with inhibiting active oxygen-eliminating ability in fresh plant products.

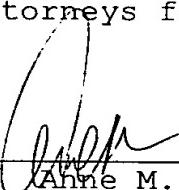
The Examiner correctly states at page 7 of the Office Action, last paragraph, that the claims recite inhibiting the decrease in active-oxygen-eliminating activity by adding trehalose, not inhibiting the active-oxygen-eliminating activity itself.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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5. (Eighth Amendment) A method for inhibiting the decrease of naturally occurring active-oxygen-eliminating activity in a fresh plant ~~in need thereof when the fresh plant is sliced or disrupted, or when an edible part of the fresh plant is disrupted wherein the decrease in said activity is associated with slicing, disruption, or boiling said fresh plant or an edible part of said fresh plant, which comprises a step of incorporating homogeneously, in an aqueous system, at least 1% of an inhibitory agent based on said fresh plant or said edible part on a dry solid basis into said fresh plant or an edible part of said fresh plant which inhibitory agent has an active-oxygen-eliminating activity before or after slicing or disrupting said fresh plant or said edible part, or during boiling said fresh plant or said edible plant, said inhibitory agent having an active-oxygen-eliminating activity comprising an effective amount of trehalose, and optionally at least one member selected from the group consisting of pullulan and cyclodextrin, and said inhibitory agent contains~~ containing at least about 20 w/w% trehalose on a dry solid basis.

33. (Amended) A method for inhibiting the decrease of naturally occurring active-oxygen-eliminating activity in a fresh plant in need thereof when the fresh plant is sliced or disrupted wherein the decrease in said activity is associated with slicing, disruption, or boiling of said fresh plant or an edible part of said fresh plant, or when an edible part of the fresh plant is disrupted, which comprises a step of homogeneously incorporating, in an aqueous system, at least 1% of an inhibitory agent based on said fresh plant or said edible part on a dry solid basis before or after slicing or disrupting said fresh plant or said edible part, or during boiling said fresh plant or edible part, wherein said inhibitory agent has having an oxygen-eliminating activity, said inhibitory agent consisting of comprising an effective amount of trehalose and optionally at least one member selected from the group consisting of pollutant pullulan and cyclodextrin, and said inhibitory agent contains art containing least about 20 w/w% trehalose on a dry solids solid basis.